

Interaction Effect of Knowledge and Use of Contraceptive Methods on Fertility among Umuahia Women of South-Eastern Nigeria

Chukwuechefulam Kingsley Imo (Corresponding author)
Department of Sociology, Faculty of Social and Management Sciences,
Adekunle Ajasin University, Akoko-Akungba, P. M. B. 001, Ondo State, Nigeria
E-mail: imochukso@yahoo.com

Ethelbert Okoronkwo
Department of Sociology, Bowen University, Iwo, Osun State, Nigeria

Vitalis Ukoji
Department of Sociology, Faculty of the Social Sciences, University of Ibadan, Oyo State, Nigeria

Abstract

Contraceptive use is a second key proximate determinant of adolescent fertility. The research is of immense importance to investigate the influence of knowledge and use of contraceptive methods on fertility among women in Abia State of southeast Nigeria. Using multi-stage sampling techniques, the study elicited information from 484 women of the reproductive age of 15-49 years. Data were gathered by the triangulation of quantitative and qualitative methods. Over two-third of the women approved the use of contraceptive methods to stop childbearing and prevent pregnancy. Contraceptive usage had strong relationship with number of children and preferred number of children. It is evident that the reason Nigeria's fertility has remained high and contraceptive use so low is complex and diverse. The need for contraceptive methods and ways of using them as well as their effects should be made known to the women through the available sources of information for sustainable development.

Keywords: Contraceptive methods, Fertility, Knowledge, and Socioeconomic factors

1. Background and Problem Statement

Family planning refers to a conscious effort by a couple to limit or space the number of children they want to have through the use of contraceptive methods. Contraceptive methods are classified as modern or traditional methods. Modern methods include female sterilisation, male sterilisation, the pill, intra-uterine device (IUD), injectables, implants, male condom, female condom, diaphragm, foam/jelly, lactational amenorrhoea method (LAM), and emergency contraception. Methods such as rhythm (periodic abstinence) and withdrawal are grouped as traditional methods. Unexpected or unplanned pregnancy poses a major public health challenge in women of reproductive age, especially in developing countries. Singh et al (2003) observed that more than 200 million women in developing countries would like to delay their next pregnancy or even stop bearing children altogether, but many of them still rely on traditional and less effective methods of contraception or use no method at all. Related studies also have shown that the total fertility rate of a nation is inversely related to the prevalence rate of contraceptive use (Mauldin and Sinding, 1993).

Contraceptive use is a second key proximate determinant of adolescent fertility, though accumulated evidence indicates that the use of family planning by women in this age group is less important a determinant of their fertility than age at entry into union. Nigeria's fertility rate dropped slightly from 6.0 to 5.7 between 1990 and 2008 (NPC & ORC Macro, 2009). The contraceptive prevalence rate (CPR) is usually defined as the percentage of currently married women who are currently using a method of contraception. NDHS 2008 reported that the overall knowledge of contraceptive methods among all women in Nigeria is 72 percent. On the use of contraceptive methods, overall, 29 percent of all women reported ever using a method of contraception at some time; 24 percent used a modern method and 13 percent used a traditional method.

Nigeria has also adopted family planning as a strategy to curb the high rate of population growth that it is presently experiencing. However, the acceptance rate of this strategy or practice is still low, as revealed by (FOS, 2000). Several studies have revealed that in spite of the efforts made by the government in this direction, the adoption rate of modern birth-control facilities and services or family planning in Nigeria remains largely insignificant (FOS, 1997; Haub and Yanagishila, 1992, Population Reference Bureau, 2002).

Many factors have been identified by some researches as contributing to unwanted pregnancy in Nigeria, and a very important factor is the low level of contraceptive use (Oye-Adeniran et al., 2005; Okpani and Okpani, 2000). In addition, a desire to limit family size to enable the family to provide a better education for the children, the increased participation of women in the labour force, and urbanization are other factors leading to

the desire of Nigerian women to have a predetermined number of children (Bankole et al., 2009).

Contraceptive prevalence rates have correlated with maternal mortality and it has been shown that countries with low contraceptive prevalence rates are also countries with very high maternal mortality ratios (Okonofua, 2003). Nigeria has one of the highest maternal mortality ratios in sub-Saharan Africa, and ranks as the country with the second highest number of maternal deaths in the world (WHO, 2005). The prevalence of contraceptive use has increased worldwide due to the development and introduction of modern contraceptives and the establishment of organized family planning programs (D'Arcanques and Vogelsohn, 2002).

2. Brief Literature Review and Theoretical framework

The proportion of Nigerian women using modern contraceptive methods rose from 3% in 1990 to 8% in 2003 (NPC, 2004). The low rate of contraceptive use in Nigeria results in high fertility rates, particularly in the rural areas and the northern part of the country. Studies conducted in six geopolitical zones of Nigeria have revealed that the reasons for not using contraceptives were fear of side effects, objections from their partner, conflicts with their religious beliefs, objections from family members, not thinking about using contraceptives, not having sexual intercourse to have a baby, and unplanned sexual debut (Abiodun and Balogun, 2009; Oye-Adeniran et al., 2005; NPC, 2004). On the sources, the literature showed that the main sources of information about contraceptive methods include friends/ siblings, radio/television/newspapers/magazines, school lectures/workshops/seminars, and health workers.

Cohen (2000) reported from a study in Malawi that female education appears to be an important determinant of current contraceptive use, perhaps because more educated women are more likely to appreciate the advantages of having fewer, better educated children. To him, small amounts of education have been found to sometimes rise rather than lower fertility because it breaks down traditional birth spacing practices such as prolonged breastfeeding or postpartum abstinence without lowering fertility desires or increasing age at marriage. Furthermore, more educated women are less likely to be fatalistic toward the use of family planning and more likely to be knowledgeable about alternative methods of family planning and their potential side-effects.

Blanc (2001) in a study of the effect of power in sexual relationships on sexual and reproductive health suggested that the balance of power within sexual relationships had an influence on the use of health services, which in turn could be linked to reproductive health outcomes. Riyami et al. (2004) found some effects of women's involvement in decision making and freedom of movement on unmet need for contraception. In Egypt, Govindasamy and Maholtra (1996) found that women's freedom of movement, having at least some control in household matters and budget decisions, and family planning decision making were all positively related to current use of contraceptives.

In southern parts of Nigeria, recent observations indicated that staff in health centres is becoming important sources of information on contraceptive methods (Abasiattai et al., 2008). This has been attributed probably because of the increased level of education among women and mothers in southern parts of Nigeria. Also, religion and Christian denomination have also been identified to have an influence on contraceptive usage. In their study of Nigerian women, Oye-Adeniran et al. (2005) observed that while the Roman Catholics get their contraceptives mostly from patent medicine shops, the majority of Christians get theirs from general hospitals. Catholic patronage of patent medicine shops and market places may be connected with a religious objection to the use of modern contraceptive methods. Muslims in the same study also patronized the patent medicine shops more often because of the reported high disapproval by Muslims of contraceptive use.

Fertility in Nigeria has been described to be on the high, which can be attributed to a variety of social and economic factors (NPC, 2006; Ainsworth, 2010). The persistently high fertility in Nigeria despite family planning programmes suggests that there are yet undetermined factors associated with contraception that has been rendering previous strategies less effective. This study aims to inform national governments and nongovernmental organizations (NGOs), working on family planning programmes; and can inform an approach to family planning that is tailored to the study area and country at large. This is important in this era of significant urbanization while realizing the estimation of the country's population in 2050 and that a significant proportion of the population still lives in the rural areas. The general objective of the study is to describe and compare the effect of knowledge and use of contraceptive methods on fertility among Umuahia women in South eastern Nigeria.

There is one theoretical explanation for fertility differentials between women in urban and rural areas. That is "Davis and Blake" framework which presumed that socio-economic and cultural variables have to operate through a set of proximate determinants that have direct influence on fertility to have their effect on fertility.

3. Methods

Data were collected using structured and in-depth interviews form that was developed by the researcher after a review of related literature and after receiving expert opinion. This study was primarily a descriptive study

involving the methodological triangulation of both quantitative and qualitative instruments to collect the data from the study population for eventual analysis. A sample of 484 resident women of reproductive age (15-49 years) was interviewed. The sampling technique used was multi-stage sampling method so as to give each respondent a fair chance of being selected. It began with the purposive selection two Local Government Areas (LGAs) and random selection of the streets and communities studied. The random sampling ensured the random selection of sample on a systematic basis. The primary data were analyzed at univariate and bivariate levels, while qualitative analysis involved the categorization of responses into objective of the study, where they fit in. Hence, the responses from the respondents were reported verbatim.

4. Results and Discussions

Socio-demographic Profile of Respondents

The mean age of the respondents was 30.4 years. This obviously shows that majority of the respondents have come of age and therefore might have had good experiences on childbearing. As regards the marital status of the respondents, about 65% reported to be currently married and living together, followed by 30.8% of those that were single, while only 3.3% were widowed. The small number of respondents that were divorced could be as a result of the social stigma attached to separated and divorced women. The large number of respondents that reported to be married and living together was a plus to this study putting into consideration the topic of the study.

Table 1 show that 45.2% of the respondents had tertiary qualification from NCE, Polytechnics, Colleges of education and Universities. Also, 44.0% reported that they had secondary school certificates, while 10.7% had primary and lower level of education. This is an indication that the quest for academic qualifications is high in Umuahia among women of childbearing age. The occupation of the respondents was mainly paid jobs. As shown in table 1, the majority of the respondents 56.8% were in paid jobs like civil service workers, bank workers, company workers and clerk jobs. Only 7.0% of the respondents were farmers. This could be as a result of high level of education of the respondents.

The result reveals that 36.2% of the respondents earned less than N10,000 in a month. This was followed by 28.1% who earned between N10,000-N20,000, while only 5.6% earned between N30,000-N40,000. This could be as a result of lack of industries in the area that compels the respondents to accept jobs that are not commensurate with their educational qualifications. Also the respondents were predominantly Igbos (96.3%) which is as a result of the study area which is an Igbo speaking region.

Table 1. Socio-demographic Profile of Respondents

Value Label	Category	No.	%
Age	< 25	115	23.8
	25 – 29	145	30.0
	30 – 34	106	21.9
	35 – 39	43	8.9
	40 – 44	43	8.9
	45+	32	6.6
	Total	484	100
Marital status	Single	149	30.8
	Married/Living together	315	65.1
	Widowed	16	3.3
	Separated/Divorced	4	0.8
	Total	484	100
Educational level	Primary and less	52	10.7
	Secondary	213	44.0
	Tertiary	219	45.2
	Total	484	100
Occupational status	Farming	34	7.0
	Paid job	275	56.8
	Petty trader	78	16.1
	Labourer	13	2.7
	Others	74	15.3
	No response	10	2.1
	Total	484	100
Income level	Less than N10,000	175	36.2
	N10,000-N20,000	136	28.1
	N20,000-N30,000	58	12.0
	N30,000-N40,000	27	5.6
	Above N40,000	34	7.0
	No response	54	11.2
	Total	484	100

Source: Field Survey, 2009

Knowledge of Family Planning and Approve or Disapprove of Couples using Contraceptive methods by Respondents

On the respondents' knowledge of family planning in the last three months before the study, more than two-third of the respondents with 73.6% reported to have heard about family planning. Also, the results on the sources of knowledge of family planning indicated that the majority of the respondents 63.8% reported to have heard of family planning through radio and television, 45.9% reported Newspapers/Magazines, while 38.2% reported friends and colleagues. The results showed that the swap of ideas on family planning among friends and colleagues was poor.

Table 2 shows that the majority of the respondents (62.7%) approved of couples using contraceptives. Also, 19.9% admitted that they disapproved couples using contraceptive methods to delay or stop pregnancy. The respondents' reasons for disapproving the use of modern contraceptive methods as reported by them were mainly attributed to their religious beliefs and fear of side effects of using them.

Table 2: Knowledge of family planning and approve or disapprove of couples using contraceptive methods by the respondents

Value label	Category	Frequency	%
Have you heard/read about family planning in last three months?	Yes	356	73.6
	No	128	26.4
	Total	484	100
If yes, what is your source Radio/TV?	Yes	309	63.8
	No	175	36.2
	Total	484	100
Newspaper and Magazines	Yes	222	45.9
	No	262	54.1
	Total	484	100
Town Criers	Yes	22	4.5
	No	462	95.5
	Total	484	100
Friends and Colleagues	Yes	185	38.2
	No	299	61.8
	Total	484	100
Schools	Yes	101	20.9
	No	383	79.1
	Total	484	100
Others	Yes	29	6.0
	No	453	93.6
	No response	2	0.4
	Total	484	100
Do you approve or disapprove of couples using contraceptive methods?	Yes	304	62.8
	No	96	19.9
	Not sure	83	17.1
	No response	1	0.2
	Total	484	100

Source: Field Survey, 2009.

Use of Female Contraceptives/Reasons by Respondents

The result shows that the majority of the respondents (51.4%) admitted to have used any of the female contraceptive methods, while 48.6% reported not to have used any of the contraceptive methods. The respondents that had used contraceptive methods submitted that they did that for child spacing and prevention of pregnancies. Also, respondents that reported not have used any of the contraceptive methods attributed their reasons to religious beliefs, husbands' refusal and financial problems. It is evident that the use of contraceptive was predominant amongst women that were still having children.

On the respondents' responses concerning the use of modern contraceptives to delay or control pregnancies in future, 45.1% out of the 235 respondents that reported not to have used contraceptive methods submitted that they would not use any of the contraceptive methods to prevent pregnancy in future, while 34.0% reported not be sure if they would use any of the contraceptive methods in future. Also, the majority of the respondents with 57.2% that reported not to have used any of the modern contraceptive methods gave their reasons to be fear of side effects of using the contraceptives in future. Only 15.0% attributed their reasons to religious belief.

Distribution of respondents by use of female contraceptive and reasons for using or not using the female contraceptives

Value label	Category	Frequency	%
Have you used any of the contraceptive methods?	Yes	249	51.4
	No	235	48.6
	Total	484	100
If “No” above, why?	Financial problems	24	10.2
	Religious belief	65	28.0
	Cultural belief	8	3.4
	Not available	7	3.0
	Husbands refusal	48	20.4
	Others	83	35.3
	Total	235	100
Do you think you will use any of the female contraceptive methods in future to prevent pregnancy?	Yes	49	21.0
	No	106	45.0
	Don’t know	80	34.0
	Total	235	100
What is your main reason that you think you will not use female contraceptive in future?	Want as many children	14	6.0
	Religious belief	35	15.0
	Costs too much	8	3.2
	Lack of knowledge	11	5.0
	Fear of side effect	135	57.2
	Other	30	13.0
	No response	2	1.0
	Total	235	100
What is your main reason for using female contraceptive methods?	Prevent HIV	5	2.0
	Child spacing	109	44.0
	To stop having children	18	7.2
	Prevent pregnancy	107	43.0
	Partner insisted	5	2.0
	Others	3	1.2
	No response	2	1.0
Total	249	100	

Source: Field Survey, 2009.

Distribution of Respondents by Use and Place to get any of the Contraceptive methods by Residence

With respect to the use of any of the contraceptive methods in urban and rural areas, table 4 shows that 60.3% of respondents in urban area had used any of the methods, compared to 42.6% of rural residents. Also, the majority of the urban respondents with 69.0% compared with 43.8% of rural respondents admitted knowing the place one can get any of the female contraceptive methods. The disparity that exist between the two areas could be attributed to the fact that some government and private hospitals and pharmacies like Federal Medical Centre (FMC) Umuahia, family chemist, Ekesco and blessed pharmacies are all situated in urban Umuahia. This corroborates the submission made by a rural respondent in an interview;

The place of one’s residence tells on the knowledge of places one can acquire the female contraceptives. We are deprived of such opportunity enjoyed by our urban counterparts because they have access to some hospitals as they all are situated in the urban area. Most of us in this rural setting do not know where and how one can get them around unless one travels out of this community (39 years rural respondent).

Another respondent from urban area aged 36 years submitted as stated below;

One can easily get any of the methods around for use. I personally visit the Federal Medical Centre (FMC), and some other private hospitals around whenever the need arises. Not only the hospitals, there are still some other pharmacies in this area where one can easily get any of the methods.

Table 4: Distribution of urban and rural respondents by use and place to get any of the contraceptive methods

Value label	Category	Urban		Rural	
		Frequency	%	Frequency	%
Have you ever used any of the modern contraceptive methods?	Yes	146	60.3	103	42.6
	No	96	39.7	139	57.4
	Total	242	100	242	100
Do you know of a place one can get female contraceptive?	Yes	167	69.0	106	43.8
	No	74	30.6	136	56.2
	No response	1	0.4	-	-
	Total	242	100	242	100

Source: Field Survey, 2009.

Distribution of Respondents by the Types of Contraceptive methods

On the types of contraceptive methods used by the respondents, table 5 indicates that despite the knowledge of the contraceptive methods by the respondents in the area, 28.3% of the respondents reported to have used pills, 27.1% have used condom, while 16.7% of the respondents reported to have used injectables. The above result revealed that the common modern contraceptive methods used among women of childbearing ages were pills, injectables and male condom. The rate at which the respondents used female condom was low compared to male condom.

Table 6: Distribution of respondents by the used types of contraceptive methods

Value label	Frequency	%
Pills	137	28.3
Injectables	81	16.7
Implants	13	2.7
Condom	131	27.1
Female condom	25	5.2
Traditional methods	22	4.5
IUDs	22	4.5
Others	5	1.0

Source: Field Survey, 2009

Distribution of respondents by use of modern contraceptive methods and fertility

The relationship between the use of modern contraceptive methods and fertility is the main focus of this section. The tables below investigate contraceptive use and respondents' number of children and desired number of children. The majority of the respondents (55.2%) with family sizes of 5 children and above reported to have used any of the modern contraceptive methods, while 44.8% had not used any of them. About 54% of the respondents with family sizes of 3-4 children reported to have used any of the modern contraceptive methods relative to 45.8% that had not used any of them.

It revealed that 56.0% of respondents that preferred 1-3 children had used contraceptive methods, while 41.0% had not used them. On the respondents that desired family size of 8 children and above, 52.9% had used any of the contraceptive methods than 47.1% that had not used any of them. The results as presented in the two tables indicate that the use of modern contraceptive methods was predominant among respondents who were still giving birth probably to space their birth, stop childbearing and prevent unplanned pregnancy. The above result could also be a function of the economic situation of the study area. However, financial problems, religious beliefs, husband refusal and fear of side effects of using the methods were the major constraints faced by the respondents that never used any of the contraceptive methods. This corroborates some findings from IDIs which could account for the reasons for the predominance of use of contraceptive among women with children. For instance, in-depth interview excerpts read thus:

It has become pertinent for my husband and me to cut our cloths according to our sizes. This is as a result of the economic hardship being experienced in our country and other parts of African countries. We have decided to initiate the use of contraceptive methods to avoid unplanned pregnancy. However, we have given birth to four (4) children and would not like to endanger their lives by adding more to them (woman aged 38 years).

Another informant posited that;

Using these contraceptive methods to delay or prevent pregnancy is essential and necessary, but it is always difficult for some of us who do

not have the money to procure them coupled with the fear of its side effects (woman aged 34 years).

Table 8: Distribution of respondents by use of modern contraceptive methods and number of children

Use of modern contraceptive	No of children			Total
	1-2	3-4	5+	
Yes	59 50.9%	58 54.2%	49 55.2%	165 53.2%
No	57 49.1%	49 45.8%	39 44.8%	145 46.8%
Total	116 100%	107 100%	87 100%	310 100%

Use of modern contraceptive	Preferred No of Children				Total
	1-3	4	5-7	8+	
Yes	36 56.0%	102 50.2%	93 50.3%	9 52.9%	240 51.5%
No	25 41.0%	101 49.8%	92 49.7%	8 47.1%	226 48.5%
Total	61 100%	203 100%	17 100%	185 100%	446 100%

Source: Field Survey, 2009.

5. Summary of findings

The findings of the study revealed that the mean age of the respondents in the area was 30.4 years and the majority of the respondents with 65.1% were married and living together. This is probably as a result of social stigma attached to separated and divorced women in Igbo land where the study was conducted. Also, 89.2% of the respondents had secondary and tertiary education which mainly comprised of urban respondents higher than that of rural. As a result, 56.8% of the respondents were in paid jobs.

In addition, the study revealed that the mean number of children and preferred number of children by the respondents were 3.6 and 4.6 children respectively. On the knowledge and use of contraceptive methods, the majority of respondents (62.8%) approved of couples using contraceptive methods to avoid pregnancy. Also, the results showed that knowledge and use of contraceptive methods in the study area was high mostly in the urban area. The main reasons of the respondents for using the contraceptive methods were for child spacing and prevention of pregnancies. The major impediments to the use of contraceptives were fear of side effect, religious beliefs and personal reasons which included not being convinced of its safety, still single, not due for them as of the time of the study and taking personal calculation of their monthly circles.

It is therefore, conceded that the reason why Nigeria's fertility has remained high and contraceptive use so low is complex and diverse. The study recommended available information on the appropriate places to get the contraceptive methods and ways of using them should be intensified by getting the women especially those in the rural areas adequately informed through the sources of information (radio/TV and Newspapers/magazines) that are mostly used by them. This information through the media should be aired in local language of the area to drive home the points on the use and safety of the contraceptive methods to the less educated people.

Government should expedite action in educating family planning and contraceptive methods clients about the side effects of the each method used, the possible actions to be taken in cases of side effects, and inform them about other methods that could be used.

5.1 Conclusion

Desire for large family sizes is high in the area studied. Though awareness of contraceptive methods was high in both rural and urban areas, use of contraceptive methods was higher among urban than rural respondents. The above evidence can be an advocating tool for more comprehensive fertility control interventions in rural areas through improved accessibility to contraceptives counselling and services.

It is imperative that a policy document aimed at decelerating the study area's fertility and growth rate should be pragmatic and realistic. Access to contraceptive methods is the most direct intervention for lowering fertility. Government should expedite action in providing information on family planning that would favour fertility decline to women from secondary school level. Also, rural women must be carefully informed on issues that surround the use of modern contraceptive methods.

The inference to be drawn from the study is that more comprehensive research should be conducted to

ascertain the routine change on knowledge and use of contraceptive methods and fertility behaviour of women in the study area. The study is useful to scholars and researchers, also policy makers and service providers through information, education and communication materials that will promote decrease on fertility.

Of course, this could help in informing those using contraceptive methods to continue taking fewer children, because they want to invest more in each child's education. But even then, this reduction of the number of children can be seen as a strategy that allows these households to keep up their higher living standard while at the same time increasing their investments in their children's education. As these investments, made possible by reduced fertility, may lead to further economic growth at both the household and district level, they might in fact strengthen the causal effect of fertility reduction on economic growth.

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